

Effect of epoetin alfa therapy on cognitive function in anaemic patients with solid tumors undergoing chemotherapy

Iconomou, G., Koutras, A., Karaivazoglou, K., Kalliolias, G., Assimakopoulos, K., Argyriou, A.A., Ifanti, A.A. and Kalofonos, H.P.

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Abstract

The primary aim of this study was to assess whether epoetin alfa (Ea) would improve cognitive performance in a group of anaemic cancer patients receiving chemotherapy. The secondary aim was to confirm the positive impact of Ea on haematological parameters, and quality of life (QOL). Fifty patients with solid tumours and haemoglobin (Hb) <11.0 g/dL received Ea 40 000 units once weekly for 12 weeks and were administered the Mini-Mental State Examination and the European Organization for Research and Treatment of Cancer (QLQ-C30) questionnaire prior to Ea therapy and at study completion. No clinically significant alterations were observed on cognitive function during Ea treatment. Changes in cognitive function were unrelated to Hb change and there were no significant differences in cognitive performance between Ea responders and non-responders. The analyses revealed clinically significant improvements in Hb levels, physical and role function, and clinically meaningful reductions in fatigue. Hb changes were significantly associated with the magnitude of improvement in QOL parameters. The lack of a clinical benefit in cognition observed in this study during Ea treatment may redirect the focus of research from enhancing to maintaining cognitive function, since stability in cognitive performance through time may be as well clinically important.

Keywords:

- anaemia
- epoetin alfa
- chemotherapy
- cognitive function
- quality of life